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PTO/SB/08A (10-96)

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Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	09/600,952
Sheet 1 of 15				Filing Date	July 25, 2000
				First Named Inventor	Chosack et al
				Group Art Unit	3739
				Examiner Name	Cameron Saadat
				Attorney Docket Number	24688

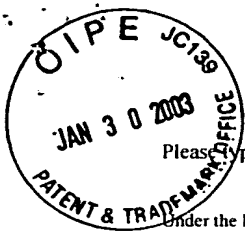
U.S. PATENT DOCUMENTS						
Examiners Initials	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, columns, lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	AA	5,408,405		Mozumder et al	04-18-1995	
	AB	5,546,312		Mozumder et al	08-13-1996	
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	BC	6,128,006		Rosenberg et al	10-03-2000	

Examiner Signature		Date Considered	7-9-03
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				Attorney Docket Number	24688

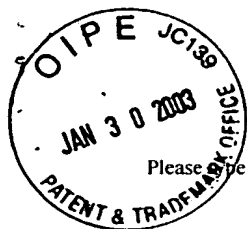
U.S. PATENT DOCUMENTS						
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	EL	5438529		Rosenberg et al	08-01-1995	
	EM	5623582		Rosenberg	04-22-1997	
	EN	5651219		Rosenthal et al	05-20-1997	
	EO	5724264		Rosenberg et al	03-03-1998	
	EP	5855344		Rogers	01-05-1999	
	EQ	6015473		Rosenberg et al	01-18-2000	
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	EW	6184868		Shahioian et al	02-06-2001	
	EX	6191774		Schena et al	02-20-2001	
	EY	6195592		Schuler et al	02-27-2001	
	EZ	6201533		Rosenberg et al	03-13-2001	
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	FA	6219033		Rosenberg et al	04-17-2001	
	FB	6232891		Rosenberg	05-15-2001	
	FC	6243078		Rosenberg	06-05-2001	
	FD	6246590		Rosenberg	06-12-2001	
	FE	6252579		Rosenberg et al	06-26-2001	
	FE	6252583		Braun et al	06-26-2001	
	FG	6256014		Gulver	07-03-2001	
	FH	6259582		Rosenberg	07-10-2001	
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	FJ	6271833		Rosenberg et al	08-07-2001	

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	EW	6317116		Rosenberg et al	11-13-2001	
	FX	6317166		McCutcheon	11-13-2001	
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		Number	Kind Code ² (if known)			
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	HJ	20020054019		Rosenberg, Louis B. et al	05-09-2002	

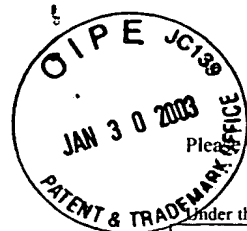
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	HK	20020054021		Rosenberg, Louis B. et al	05-09-2002	
	HL	20020063685		Rosenberg, Louis B. et al	05-30-2002	
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	HQ	20020138562		Wies, Evan F. et al	09-26-2002	
	HR					

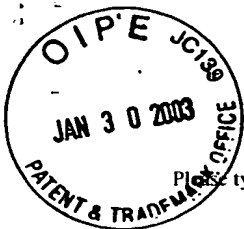
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		Office ³	Number ⁴	Kind Code ² (if known)				
	HS	WO	0021071	A2	Immersion Corporation	04-13-2000		
	HT	WO	0026891	A1	Immersion Corporation	05-11-2000		
	HU	WO	0054554	A1	Immersion Entertainment LLC	09-14-2000		
	HV	WO	0067246	A1	Immersion Corporation	11-09-2000		
	HW	WO	0068927	A1	Immersion Corporation	11-16-2000		
	HX	WO	0103105	A1	Immersion Corporation	01-11-2001		
	HY	WO	0106514	A1	Total Immersion S.A.R.L.	01-25-2001		
	HZ	WO	0113354	A1	Immersion Corporation	02-22-2001		
	IA	WO	0124158	A1	Immersion Corporation	04-05-2001		
	IB	WO	0191100	A1	Immersion Corporation	11-29-2001		
	IC	WO	0203172	A2 A3	Immersion Corporation	01-10-2002		
	ID	WO	0217044	A2 A3	Immersive Technologies LLC	02-28-2002		
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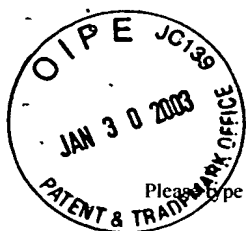
OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
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	BY	Van Epps et al, Harvesting, Characterization, and Culture of CD34+ Cells from Human Bone Marrow, Peripheral Blood, and Cord Blood, Blood Cells, 1994. Vol. 20, pp. 411-423	
	BZ	Emerson, Ex Vivo Expansion of Hematopoietic Precursors, Progenitors, and Stem Cells: The Next Generation of Cellular Therapeutics, Blood, Vol. 87, No. 8, April 15, 1996, pp. 3082-3088	
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	CC	Zimmerman, et al, Large-Scale Selection of CD34+ Peripheral Blood Progenitors and Expansion of Neutrophil Precursors for Clinical Applications, Journal of Hematotherapy, Vol. 5, 1996, pp. 247-253	
	CD	Koller et al., Large-Scale Expansion of Human Stem and progenitor Cells from Bone Marrow Mononuclear Cells in Continuous Perfusion Cultures, Blood, Vol. 82, No. 2, July 15, 1993, pp. 378-384	
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	CF	Sandstrom et al., Effects of CD34+ Cell Selection and Perfusion on Ex Vivo Expansion of Peripheral Blood Mononuclear Cells, Blood, Vol. 96, No. 3, August 1, 1995, pp. 958-970	

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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
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	CG	Eipers, et al., Retroviral-Mediated Gene Transfer in Human Bone Marrow Cells Grown in Continuous Perfusion Culture Vessels, Blood, Vol. 10, November 15, 1995, pp. 3754-3762	
	CH	Freedman, et al., Generation of Human T Lymphocytes from Bone Marrow CD 34+ cells in vitro, Nature Medicine, Vol. 2, No. 1, January 1996, pp. 46-51	
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	CK	Rosenberg, et al., Prospective Randomized Trial of High-Dose Interleukin-2 Alone or in Conjunction with Lymphokine-Activated Killer Cells for the Treatment of Patients with Advanced Cancer, Journal of the National Cancer Institute, Vol. 85., No. 8, April 21, 1993, pp. 622-632	
	CL	Bernhard, et al., Generation of Immunostimulatory Dendritic Cells from Human CD34+ Hematopoietic Progenitor Cells of the Bone Marrow and Peripheral Blood, Cancer Research, Vol. 55, March 1, 1995, pp. 1099-1104	
	CM	Fisch, et al., Generation of Antigen-Presenting Cells for Soluble Protein Antigens ex vivo from Peripheral Blood CD34+ Hematopoietic Progenitor Cells in Cancer Patients, Eur. J. Immunol, 1996, Vol., 26, pp. 595-600	
	CN	Siena et al., Massive ex vivo generation of functional dendritic cells from mobilized CD 34+ Blood Progenitors for Anticancer Therapy, Experimental Hematology, Vol. 23, 1995, pp. 1463-1471	

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				First Named Inventor	Chosack et al
				Group Art Unit	3739
				Examiner Name	Cameron Saadat
Sheet	5	of	15	Attorney Docket Number	24688

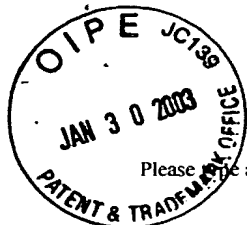
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	CO	Petzer et al., Differential Cytokine Effects on Primitive (CD34+ CD38 ⁻) Human Hematopoietic Cells: Novel Responses to Flt3-Ligand and Thrombopoietin, Acad. Sci., Vol. 87, pp. 2551-2558	
	CP	Schwartz, et al., In Vitro Myclopoeisis Stimulated by Rapid Medium Exchange and Supplementation with Hematopoietic Growth Factors, Blood, Vol. 78, No. 12, December 15, 1991, pp. 3155-3161	
	CQ	Verfaillie, Can Human Hematopoietic Stem Cells be Cultured Ex Vivo? Stem Cells, 1994, Vol. 12, pp. 466-476	
	CR	Haylock, et al., Ex Vivo Expansion and Maturation of Peripheral Blood CD 34+ Cells into the Myeloid Lineage, Blood, Vol. 80, No. 5, September 15, 1992, pp. 1405-1412	
	CS	Brugger, et al., Ex Vivo Expansion of Enriched Peripheral Blood CD 34+ Progenitor Cells by Stem Cell Factor, Interleukin-1 β (IL-1 β), IL-6, IL-3, Interferon- γ , and Erythropoietin, Blood, Vol. 81, No. 10, May 15, 1993, pp. 2579-2584	
	CT	Sato, et al., In Vitro Expansion of Human Peripheral Blood CD 34+ Cells, Blood, Vol. 82, December 15, 1993, pp. 3600-3609	
	CU	Fibach, et al., Proliferation and Maturation of Human Erythroid Progenitors in Liquid Culture, Blood, Vol., 73, No. 1, January 1998, pp. 100-103	
	CV	Fibach et al., Growth of Human Normal Erythroid Progenitors in Liquid Culture: A Comparison with Colony Growth in Semisolid Culture, International Journal of Cell Cloning, Vol. 9, 197, pp. 57-64	

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	CW	Fibach, et al., The Two-Step Liquid Culture: A Novel Procedure for Studying Maturation of Human Normal and Pathological Erythroid Precursors, Stem Cells, 1993, Vol. 11 (suppl. 1) pp. 36-41	
	CX	Dalyot et al., Adult and Neonatal Patterns of Human Globin Gene Expression are Recapitulated in Liquid Cultures, Experimental Hematology, Vol. 20, 1992, pp. 1141-1145	
	CY	Banno et al., Anemia and Neutropenia, Vol. 35, November 11, 1994, pp. 1276-1281	
	CZ	Wasa, et al., Copper Deficiency with Pancytopenia During Total Parenteral Nutrition, Journal of Parenteral and External Nutrition, March-April 1994, Vol. 18, No. 3, pp. 190-192	
	DA	Zidar, et al., Observations on the Anemia and Neutropenia of Human Copper Deficiency, American Journal of Hematology, No. 3, 1977, pp. 177-185	
	DB	Hirase, et al., Anemia and Neutropenia in a Case of Copper Deficiency: Role of Copper in Normal Hematopoiesis, Acta Haematol, 1992, Vol. 87, pp. 195-197	
	DC	Percival, et al., L-60 Cells can be made Copper Deficient by Incubating with Tetraethylenepentamine ^{1,2,3} , American Institute of Nutrition, August 25, 1992, pp. 2424-2429	
	DE	Percival, et al., Neutropenia Caused by Copper Deficiency: Possible Mechanisms of Action, Nutrition Reviews, Vol. 53, No. 3, March 1995, pp. 56-66	
	DF	Bae, et al., Retinoic Acid-Induced HL-60 Cell Differentiation is Augmented by Copper Supplementation ^{1,2} , American Institute of Nutrition, January 26, 1993, pp. 997-1002	

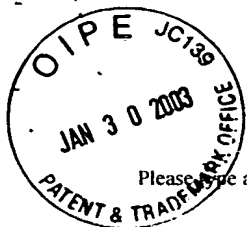
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	DG	Bae, et al., Copper Uptake and Intracellular Distribution During Retinoic Acid-Induced Differentiation of HL-60 Cells, J. Nutr. Biochem, September 5, 1994, Vol. 5, pp. 457-461	
	DH	Alter, Fetal Erythropoiesis in Stress Hematopoiesis, Experimental Hematology, Vol. 7, Suppl. 5, 1979, pp. 200-209	
	DI	Duncan et al., Repair of Myelin Disease: Strategies and Progress in Animal Models, Molecular Medicine Today, December 1997, pp. 554-561	
	DJ	Blau, et al., Fetal Hemoglobin in Acute and Chronic States of Erythroid Expansion, Blood, Vol. 81, No. 1, January 1, 1993, pp. 227-233	
	DK	Ross, et al., Chelometric Indicator Titrations with the Solid-State Cupric Ion-Selective Electrode, Analytical Chemistry, Vol. 41, No. 13, November 1969, pp. 1900-1902	
	DL	Fosmire, Zinc Toxicity ^{1,2} , American Journal Clinical Nutrition, 1990, Vol., 51, pp. 225-227	
	DM	Simon, et al., Copper Deficiency and Sideroblastic Anemia Associated with Zinc Ingestion, American Journal of Hematology, Vol. 28, 1988, pp. 181-183	
	DN	Hoffman, et al., Zinc-Induced Copper Deficiency, Gastroenterology, 1988, Vol. 94, No. 2, pp. 508-512	
	DO	Reeves, High Zinc Concentrations in Culture Media Affect Copper Uptake and Transport in Differentiated Human Colon Adenocarcinoma Cells ^{1,2,3} , American Institute of Nutrition, February 29, 1996, pp. 1701-1712	

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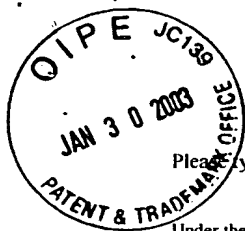
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	DP	Tashiro-Itoh, et al., Metallothionein Expression and Concentrations of Copper and Zinc are Associated with Tumor Differentiation in Hepatocellular Carcinoma, Liver, 1997, Vol. 17, pp. 300-306	
	DQ	Cable et al., Exposure of Primary Rat Hepatocytes in Long-Term DMSO Culture to Selected Transition Metals Induces Hepatocyte Proliferation and Formation of Duct-Like Structures, Hepatology, Vol., 26, No. 6, 1997, pp. 1444-1457	
	DR	Kizaki, et al., Regulation of Manganese Superoxide Dismutase and Other Antioxidant Genes in Normal and Leukemic Hematopoietic Cells and Their Relationship to Cytotoxicity by Tumor Necrosis Factor, Blood, Vol. 82, No. 4, August 15, 1993, pp. 1142-1150	
	DS	Brugnera, et al., Cloning, Chromosomal Mapping and Characterization of the Human Metal-Regulatory Transcription Factor MTF-1, Nucleic Acids Research, 1994, Vol. 22, No. 15, pp. 3167-3173	
	DT	Heuchel, et al., The Transcription Factor MTF-1 is Essential for Basal and Heavy Metal-Induced Metallothionein Gene Expression, The EMBO Journal, 1994, Vol. 13, No. 12, pp. 2870-2875	
	DU	Palmiter, et al., Regulation of Metallothionein Genes by Heavy Metals Appears to be Mediated by a Zinc-Sensitive Inhibitor that Interacts with a Constitutively Active Transcription Factor, MTF-1, Proc. Natl. Acad. Sci, Vol. 91, February 1994, pp. 1219-1223	
	DV	Hatayama, et al., Regulation of hsp70 Synthesis Induced by Cupric Sulfate and Zinc Sulfate in Thermotolerant HeLa Cells, J. Biochem, 1993, Vol. 114, pp. 592-597	

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	DW	Filvaroff, et al., Functional Evidence for an Extracellular Calcium Receptor Mechanism Triggering Tyrosine Kinase Activation Associated with Mouse Keratinocyte Differentiation, The Journal of Biological Chemistry, Vol. 269, No. 34, August 26, 1994, pp. 21735-21740	
	DX	Okazaki, et al., Characteristics and Partial Purification of a Novel Cytosolic, Magnesium-Independent, Neutral Sphingomyelinase Activated in the Early Signal Transduction of 1 α ,25-Dihydroxyvitamin D ₃ -induced HL-60 Cell Differentiation, The Journal of Biological Chemistry, February 11, 1994, Vol. 269, No. 6, pp. 4070-4077	
	DY	Kim, et al., Differentiation and Identification of the Two Catalytic Metal Binding Sites in Bovine Lens Leucine Aminopeptidase by X-Ray Crystallography, Proc. Natl. Acad. Sci, June 1993, Vol. 90, pp. 5006-5010	
	DZ	Fibach, Normal Differentiation of Myeloid Leukaemic Cells Induced by a Differentiation-Inducing Protein, Nature New Biology, Vol. 237, June 28, 1972, pp. 276-278	
	EA	Lapidot, et al., Cytokine Stimulation of Multilineage Hematopoiesis from Immature Human Cells Engrafted in SCID Mice, Reports, February 28, 1992, pp. 1137-1141	
	EB	Cicuttini, et al., Support of Human Cord Blood Progenitor Cells on Human Stromal Cell Lines Transformed by SV₄₀ Large T Antigen Under the Influence of an Inducible (Metallothioncin) Promoter, Blood, Vol. 80, No. 1, July 1, 1992, pp. 102-112	
	EC	Pickart et al., Growth-Modulating Plasma Tripeptide May Function by Facilitating Copper Uptake into Cells, Nature, Vol., 288, 18/25 December 1980, pp. 715-717	

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